REMARKS

Upon entry of the Amendment, Claims 1-5 and 7-24 will be pending in the application.

The title is amended to recite "Fuel Cell", and the subject matter of each of the claims is amended accordingly.

Claim 1 is further amended to recite "said plurality of unit cells share said solid electrolyte membrane, and are electrically connected to each other by at least one electrically conductive member, wherein a low ion conductive region of said solid electrolyte membrane is located between said unit cells." Claim 6 is now canceled.

New Claims 15-24 are added. Support can be found, for example, starting at page 9, line 8 to page 11, line 24. No new matter is added.

Entry of the Amendment along with reconsideration and review of the claims on the merits are respectfully requested.

Response to Claim Objections

A. Claims 11 and 12 are objected to because of the following informalities: Objection to the term "is any of a... and an...".

In response, Applicants amend Claims 11-12 to recite a Markush grouping, as suggested by the Examiner.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to Claims 11-12.

B. Claims 1-14 are objected to because of the following informalities: The wording of the preamble, "liquid fuel supply type fuel cell" is objected to because of the word, "type" which appears unnecessary.

In response, Applicants amend the preamble of Claims 1-14, without affecting the scope of the claims thereof, to recite "fuel cell" by deleting the words "liquid fuel supply type" before "fuel cell".

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to Claims 1-14.

Response to Double Patenting

Claims 6-14 are provisionally rejected under 35 U.S.C. §101 as assertedly claiming the same invention as that of claims 1-8 and 10 of copending Application No. 10/727,549.

As this is only a provisional rejection, and as Applicants will allow copending Application No. 10/727,549, to go abandoned, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 101.

Response to Claim Rejections - 35 USC § 103

Claims 1-14 are rejected under 35 U.S.C. §103(a) as assertedly being unpatentable over Maeda et al. (U.S. Pat. Application Pub. 2004/0086762 Al), for the reasons given in the Office Action.

The Examiner cites Maeda et al. as teaching a fuel cell comprising a plurality of unit cells electrically connected to each other (abstract), each cell having a shared common solid electrolyte membrane (sect. 0022), a fuel electrode on one surface and an oxidizer electrode on the other surface of the electrolyte (sect. 0060). The Examiner asserts that Maeda "teaches a region of membrane having a groove or recesses formed on it (sect. 0023). It teaches the groove or recess is filled with insulating resin (sect. 0068)." (see Office Action, paragraph 6).

The Examiner further asserts that "the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because although the prior art of record does not disclose 'a low ion conductivity region between adjacent ones of said unit cells', since there is a region of insulating resin between adjacent cells, these regions would have low ion conductivity." (see Office Action, paragraph 6).

Applicants respond as follows.

Maeda fails to render obvious the present invention.

First, Applicants point out that the Examiner recites "a low ion conductivity region between adjacent ones of said unit cells". However, this language is not claimed in the present application. Instead, it is clear that in present Claim 1, the low ion conductive region exists in the solid electrolyte membrane, between two adjacent cells.

Amended Claim 1 recites "wherein said plurality of unit cells share said solid electrolyte membrane, and are electrically connected to each other by at least one electrically conductive member, wherein a low ion conductive region of said solid electrolyte membrane is located between said unit cells, and the electrically conductive member is formed in a region other than

the low ion conductive rgeion."

The specification describes that in conventional fuel cells, reduction in the spacing between unit cells gives rise to a problem of electric leak which causes a lower voltage. However, in the fuel cell of the present invention, the low ion conductivity region is provided between adjacent unit cells in the solid electrolyte membrane to prevent the electric leak (see page 5, lines 20-24). Thus, it is more clear that in present Claim 1 the low ion conductive region is part of the solid electrolyte membrane structure.

In comparison, the Examiner points to Maeda disclosing a low ion conductivity region from a region located in the structure of an insulating resin. However, Maeda's insulating resin is not part of Maeda's solid electrolyte membrane. Thus, Maeda fails to disclose or suggest at least Applicants' claimed feature "wherein a low ion conductive region of said solid electrolyte membrane is located between said unit cells."

Further, Maeda describes "at least one of a through hole connecting portion, a filled via connecting portion, and a bump connecting portion is provided in an insulating portion located between the adjacent unit cells" in its Claim 1. Namely, at least one electrically conductive member is formed in a low ion conductive region in Maeda.

In contrast, in amended Claim 1 of the present invention, the electrically conductive member is formed in a region other than the low ion conductive region. Therefore, the present invention is distinguished from Maeda in the construction of an electrically conductive member and a low ion conductive region.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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